REMARKS

Claims 1-16 stand rejected under 35 USC §112, second paragraph, as being indefinite. The Examiner finds that the recitations in claim 1 of "the die cutters" (line 2) and "the axes of the cylinders" (lines 6-7) lack antecedent basis.

With respect to the quoted limitation "the die cutters", it is believed the Examiner meant "the die cylinders". Appropriate amendment has been made to both recitations in a manner to now provide sufficient antecedent basis for the limitations.

Claims 1 and 2 stand rejected under 35 USC §103(a) as obvious over de Jesus, Jr. (U.S. 6,408,667) in view of Pav et al (U.S. 4,685,390).

With respect to claim 1, de Jesus is cited as disclosing a vertical support and rectilinear translation arrangement for selectively repositioning die cylinders (2,3) between an operative position and a stand-by position in a rotary die cutter (1) having an anvil cylinder (4) and a pair of die cylinders (2,3) alternately operable with said anvil cylinder (after repositioning) to define an operating nip for sheet materials being fed in a machine direction perpendicular to the axes of the cylinders, said arrangement comprising: a supporting base (3b); the pair of die cylinders (2,3) supported at axial opposite cylinder ends for horizontal linear movement in the machine direction on said supporting base relative respectively to the other of said pair of die cylinders or said anvil cylinder; and, said respective pairs of die cylinders (2,3) supported at opposite axial cylinder ends for vertical movement between an operative position and a stand-by position, wherein, in said operative position, said anvil cylinder (4) and at least one of said die cylinders (2,3) are vertically aligned and supported on said supporting base (3b). de Jesus, Jr. does not disclose that one of said pair of die cylinders (2,3) is supported for horizontal movement relative respectively to the other of said die cylinders.

Pav et al teaches the capability of horizontal movement of a single die cylinder (11,12,13,14) when replacing it with another die cylinder (reference made to page 6, lines 67-68 and page 7, lines 1-46) for the purpose of being able to change out only one die cylinder when the other die cylinders do not need replacement. Therefore, the Examiner finds it would have been obvious to combine the arrangement of de Jesus with the capability of Pav in order to be able to selectively replace individual die cylinders in the horizontal machine direction.

With respect to claim 2, it is the Examiner's position that the de Jesus/Pav combination discloses the invention as claimed, including disclosing that the first anvil cylinder

(4) is supported for vertical linear movement together with the operating die cylinder (2), supported for vertical movement together if both raised simultaneously using respective raising devices (page 7, lines 33-61) between an operating position and a die cylinder exchange position. de Jesus does not disclose that the operating position is the upper position and the exchange position is the lower position. However, the Examiner finds it would have been obvious to use these positions, as it would only require a rearrangement of the cylinder supports to make the operating position the upper position and the exchange position the lower position. In support, the Examiner cites In re Japikse for the position that rearranging parts of an invention involves only routine skill in the art.

The foregoing rejections are respectfully traversed in view of the amendments to claim 1 and the comments which follow.

There is a significant deficiency in the teaching of both de Jesus '667 and Pav '390, which deficiency is common to the previously applied prior art, but which is remedied by the subject invention as claimed in amended claim 1. Both de Jesus and Pav require, at some point during the roll change, the movement of one or more rolls laterally (in the cross machine direction) out of the board line (or sheet line in de Jesus) and outside the operating nip.

With respect to de Jesus '667, the roll change apparatus in a rolling mill includes pairs of working rolls (2,3) that are moved on a supporting base (13) in the machine direction (see Figs. 4a and 4b). However, as part of the roll change process in de Jesus, the rolls (2,3) are moved laterally in the direction of the roll axes out of the board line (roll line in de Jesus) to effect the roll change. Referring to column 7, lines 51-54 of de Jesus, it is stated as follows:

> The work rolls 2 and 3 . . . may be removed from the mill stand by sliding them along the lifting rails 7, across the slide-rail bridge 29b, and onto the slide-rail set 29.

Furthermore, movement of the working rolls (2,3) on the supporting base (13) occurs only when the rolls and base are outside the operating nip. When the rolls (2,3), coupled together as a single work roll unit (11) have been refurbished, the procedure is reversed and the refurbished rolls (2,3) are slid laterally from the lateral position outside the nip and board line into their operative position in the mill.

With respect to Pav '390, it also suffers from the same deficiency as de Jesus, namely, movement of the rolls (11-14) laterally outside of the operating line of the equipment at

some point during the roll change. Referring to the description in Pav, beginning on line 32 of column 8, it is stated as follows:

> the respective exchangeable roll or rolls are transferred from the main frame 1 [laterally] into the framework 26 of the transporting unit 25.

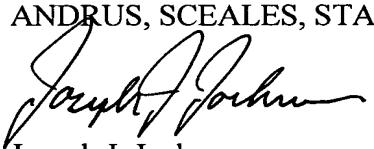
In applicants' apparatus, on the other hand, none of the rolls is moved laterally (in the cross machine direction) outside the lateral extent of the nip defined by the operation of one of the die cylinders 11 or 13 with the anvil cylinder 12. This is an important aspect of applicants' invention because it frees space on one or both sides of the die cutter and, in addition, the die cylinders 11 and 13 always remain supported in their end supports 18 so that the cylinders never have to be removed or detached from their supporting bearings.

Amended claim 1 now clearly recites that the supporting base for the various cylinders is maintained within the lateral extent of the operating nip and the die cylinders are confined to the same lateral extent of the nip for all conditions of movement (vertical or horizontal).

For all of the foregoing reasons, amended claim 1 and dependent claims 2-16 are believed to be in condition. Further favorable action is, therefore, respectfully requested.

Respectfully submitted,

ANDRUS, SCEALES, STARKE & SAWALL, LLP



Joseph J. Jochman
Reg. No. 25,058

100 East Wisconsin Avenue, Suite 1100
Milwaukee, Wisconsin 53202
Telephone No. (414) 271-7590
Attorney Docket No.: 4864-00020